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# THE FARM INDEX

ECONOMIC RESEARCH SERVICE • U. S. DEPARTMENT OF AGRICULTURE • JULY 1966

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A Century of  
Statistics

Rural Metamorphosis

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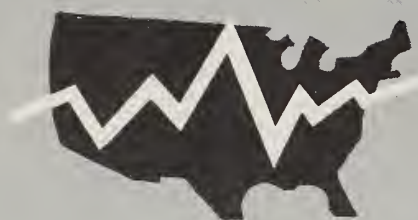
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*Flowers:*

*what  
makes  
the  
sales  
bloom?*







# economic trends

ITEM	UNIT OR BASE PERIOD	'57-'59 AVERAGE	1965		1966		
			YEAR	MAY	MARCH	APRIL	MAY
<b>Prices:</b>							
Prices received by farmers	1910-14=100	242	248	251	269	265	263
Crops	1910-14=100	223	232	247	231	236	239
Livestock and products	1910-14=100	258	261	254	303	291	284
Prices paid, interest, taxes and wage rates	1910-14=100	293	321	323	331	333	333
Family living items	1910-14=100	286	306	307	314	314	315
Production items	1910-14=100	262	276	277	284	283	283
Parity ratio		83	77	78	81	80	79
Wholesale prices, all commodities	1957-59=100	—	102.5	102.1	105.4	105.5	105.5
Commodities other than farm and food	1957-59=100	—	102.5	102.3	104.0	104.3	104.7
Farm products	1957-59=100	—	98.4	98.4	106.8	106.4	104.5
Food, processed	1957-59=100	—	105.1	103.3	111.5	110.6	110.5
Consumer price index, all items	1957-59=100	—	109.9	109.6	112.0	112.5	—
Food	1957-59=100	—	108.8	107.9	113.9	114.0	—
<b>Farm Food Market Basket: <sup>1</sup></b>							
Retail cost	Dollars	983	1,042	1,030	1,103	1,100	—
Farm value	Dollars	388	409	414	452	445	—
Farm-retail spread	Dollars	595	633	616	651	655	—
Farmers' share of retail cost	Per cent	39	39	40	41	40	—
<b>Farm Income:</b>							
Volume of farm marketings	1957-59=100	—	118	87	94	87	89
Cash receipts from farm marketings	Million dollars	32,247	38,930	2,546	2,971	2,766	2,716
Crops	Million dollars	13,766	17,144	823	812	767	732
Livestock and products	Million dollars	18,481	21,786	1,723	2,159	1,999	1,984
Realized gross income <sup>2</sup>	Billion dollars	—	44.4	—	47.0	—	—
Farm production expenses <sup>2</sup>	Billion dollars	—	30.3	—	31.7	—	—
Realized net income <sup>2</sup>	Billion dollars	—	14.1	—	15.3	—	—
<b>Agricultural Trade:</b>							
Agricultural exports	Million dollars	4,105	6,229 <sup>3</sup>	533	625	552	—
Agricultural imports	Million dollars	3,977	4,088 <sup>3</sup>	388	431	383	—
<b>Land Values:</b>							
Average value per acre	1957-59=100	—	139	139 <sup>4</sup>	157 <sup>5</sup>	—	—
Total value of farm real estate	Billion dollars	—	159.4	159.4 <sup>4</sup>	171.1 <sup>5</sup>	—	—
<b>Gross National Product <sup>2</sup></b>	Billion dollars	457.3	676.3	657.6	713.9	—	—
Consumption <sup>2</sup>	Billion dollars	294.2	428.7	416.9	451.8	—	—
Investment <sup>2</sup>	Billion dollars	68.0	105.7	103.4	111.7	—	—
Government expenditures <sup>2</sup>	Billion dollars	92.4	134.8	131.3	144.0	—	—
Net exports <sup>2</sup>	Billion dollars	2.7	7.1	6.0	6.4	—	—
<b>Income and Spending: <sup>6</sup></b>							
Personal income, annual rate	Billion dollars	365.3	530.7	525.0	551.4	563.1	565.5
Total retail sales, monthly rate	Million dollars	17,098	23,662	23,317	25,536	25,020	24,424
Retail sales of food group, monthly rate	Million dollars	4,160	5,577	5,497	5,917	6,009	—
<b>Employment and Wages: <sup>6</sup></b>							
Total civilian employment	Millions	64.9	72.2	71.8	73.4	73.8	73.2
Agricultural	Millions	6.0	4.6	4.9	4.4	4.5	4.1
Rate of unemployment	Per cent	5.5	4.6	4.6	3.8	3.7	4.0
Workweek in manufacturing	Hours	39.8	41.2	41.1	41.5	41.5	41.4
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.61	2.61	2.68	2.70	2.70
<b>Industrial Production <sup>6</sup></b>	1957-59=100	—	143	142	153	154	155
<b>Manufacturers' Shipments and Inventories: <sup>6</sup></b>							
Total shipments, monthly rate	Million dollars	28,745	40,279	39,814	44,121	43,656	—
Total inventories, book value end of month	Million dollars	51,549	68,015	64,269	69,648	70,273	—
Total new orders, monthly rate	Million dollars	28,365	41,023	40,181	45,833	45,099	—

<sup>1</sup> Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1960-61—estimated monthly. <sup>2</sup> Annual rates seasonally adjusted first quarter. <sup>3</sup> Preliminary. <sup>4</sup> As of March 1, 1965. <sup>5</sup> As of March 1, 1966. <sup>6</sup> Seasonally adjusted.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).



# THE AGRICULTURAL OUTLOOK

With increasingly commercial and more specialized farms, feed grains have become a major cash crop rather than one used mostly on farms where grown. And not all this change was due to commercialized livestock and poultry production. Feed grain exports have accounted for a growing share of feed grain sales in recent years.

Only 21 per cent of the 1935 feed grain crops entered commercial channels. But sales from the 1965 crop should reach a record 51 per cent. In recent years sales as a percentage of production have steadily increased for each of the feed grains. Nearly half of the corn, a third of the oats and about three-fourths of the barley and grain sorghum crops for 1965 have been or will be sold during their respective 1965/66 marketing years. Total value of sales from the 1965 feed grain crops has been estimated at over \$3.2 billion, 16 per cent more than in 1964/65 and about a third above 1961/62, the first year of the Feed Grain Program.

Sales from the 1965 crops should total a record 82.6 million tons, 13 million above the 1959-63 average. Much of the increase in sales in recent years has gone into export. But purchases for livestock feeding and the quantity used for food and industry also have increased. About a third of the 1965/66 commercial movement (which includes some sales from earlier crops in CCC stocks) will go into export, about a sixth into food and industrial uses and most of the remainder into livestock feeds.

## COMMODITY HIGHLIGHTS

Domestic use and exports of feed grains have been record-large so far in 1965/66, reflecting expanding domestic and foreign markets for corn. For the entire marketing year, feed grain disappearance is now expected to be around 166 million tons, 14 million more than in 1964/65. Domestic use is expected to reach 137 million tons, 7 million more than in 1964/65 and slightly above the previous record consumption in 1961/62.

Exports increased sharply this year, and during October-April totaled 50 per cent more than a year earlier. For all of 1965/66, exports are expected to total around 29 million tons—a third above the 1964/65 level. Combined disappearance would total about 5 million tons larger than the 1965 crop, reducing year-end carryover to about 51 million tons.

Domestic use of corn in 1965/66 is expected to increase to nearly 3.6 billion bushels, about 200 million bushels more than in 1964/65. Exports are expected to increase to around 725 million bushels, about a fourth greater than last year. This would increase the total utilization to about 4.3 billion bushels, about 350 million more than in 1964/65. The carryover next October 1 is expected to be reduced to around a billion bushels, about 10 per cent less than a year earlier and the smallest since 1955.

## Turkey Prices Weaken

Weakness has appeared in turkey prices after many months of relatively strong prices. U.S. farm turkey prices in mid-May, at 23.0 cents a pound, were 1.7 cents below March and 0.8 cent below May 1965. May was the first month since December 1964 that the farm turkey price had been below a year earlier.

Prior to a sharp rise in early June, egg prices were also weak. Some further weakness is expected in both egg and poultry prices later in the year. Egg prices received by U.S. farmers in mid-May averaged 33.2 cents a dozen. This was 3.7 cents above a year earlier, but down 8.4 cents—more than seasonally—from the peak reached in March. In March, egg prices were the highest for any month in more than five years.

However, prices for chickens advanced in May. Broiler prices rose 0.9 cent per pound from April to 16.7 cents in May—1.3 cents above May 1965.

Expansion in economic activity, which has helped to keep prices of poultry and eggs above a year earlier in recent months, is expected to



continue in the remaining months of 1966. However, supplies of high-protein foods, particularly poultry, eggs and red meat, likely will be more plentiful than a year earlier this fall and winter. In recent months, per capita supplies of high-protein foods have been relatively tight. As supplies increase, they will exert downward pressures on prices. Late in the year, egg and poultry prices probably will average below those of a year earlier. Egg prices over the next few months may show little, if any, further seasonal rise.

### Fluid Milk Sales Up

Milk production in January-May was down 4.7 per cent from a year earlier and is expected to continue lower than a year earlier in the third quarter. Rising consumer incomes and population have helped boost sales of fluid milk products above last year by 1 to 2 per cent so far in 1966. This, coupled with reduced marketings, meant about 12 per cent less milk available for manufactured dairy products in January-May. The decline chiefly affects output of butter and nonfat dry milk. Through May this year, USDA purchased no cheese and only small amounts of butter—0.2 billion pounds (milk-equivalent), compared with 4.7 billion pounds for cheese and butter—mostly butter—a year earlier.

Prices to producers for all milk in the second quarter averaged around \$4.40 per 100 pounds of milk, up from \$3.93 in the second quarter of 1965. Both manufacturing and fluid milk prices were unusually strong in the second quarter,

when the flush production occurred, because of the favorable supply-consumption situation as well as the strong storage demand for butter and cheeses. Milk prices likely will rise seasonally, continuing at levels well above last year.

### New Cigarette Records Expected

Output and consumption of cigarettes in the year ended June 30, 1966 are estimated to have been slightly above the previous year's record highs. On the other hand, consumption of cigars likely declined about 3 per cent below the preceding year's peak, but was still about 4 per cent above 1963/64. Smoking tobacco consumption (mainly for pipes) was about 7 per cent less than a year earlier and 13 per cent less than two years earlier when there was an upsurge in consumption following the smoking and health report issued in January 1964. Relatively little change is estimated to have occurred in total production of chewing tobacco, but snuff output likely dipped below 1964/65.

On June 10 USDA announced broadened tobacco export provisions to extend export payments of 5 cents per pound to most kinds of tobacco in an effort to regain and expand foreign markets. The expanded program will be applicable to all crops of the kinds on which price support is offered for the 1966 crop. Tobaccos not covered are cigar wrapper, Pennsylvania cigar filler and Maryland tobaccos. Payments are in addition to rebates (also 5 cents per pound) previously offered for selected earlier crops of flue-cured, fire-cured and dark air-cured tobaccos.

### *Numbers in parentheses at end of stories refer to sources listed below:*

1. Meat Animals: Farm Production, Disposition and Income, by States, 1964-65, MtAn 1-1 (66) (P); 2. W. R. Bailey, Resource Management Under Conditions of Uncertainty (M); 3. Tobacco Situation, TS-115 (P); 4. R. L. Rizek, "The Cattle Cycle," Livestock & Meat Situation, LMS-148 (P); 5. D. Seaborg, "Cattle Feeding and Feeding Margins," Livestock & Meat Situation, LMS-148 (P); 6. A. M. Heagler, F. T. Cooke, Jr. and T. E. Tramel, The Place of Cow-Calf Enterprises in the Farming Systems in the Yazoo-Mississippi Delta, Miss. Agr. Expt. Sta. Bul. 719 (P\*); 7. Farm Mortgage Lending FML-16 (P); 8. W. V. Dexter (SM); 9. W. W. Scofield, The General Outlook for Rural Real Estate Values (S); 10. Economic Development Division, Rural People in the American Economy (M); 11. Economic Development Division, Farm Population, Series Census-ERS P-27, No. 36 (P); 12. E. G. Youmans, Family Disengagement Among Older Urban and Rural Women, Ky. Agr. Expt. Sta. (M\*); 13. W. W. Bauder, Farmers' Definitions of Retirement (M); 14. S. E. Brown, Demand for Flowers by Wire (M); 15. & 16.

N. Havas, Profile of the Retail Florist Industry, 1964, MRR-741 (P); 17. F. A. Lasley, Coordinating Fluid Milk Supplies in the Pittsburgh Market, MRR-746 (P); 18. S. M. Sackrin and C. Hendrickson (SM); 19. R. E. Freeman, Prices and Margins for Fluid Milk," Dairy Situation, DS-311 (P); 20. D. H. Rahe (SM); 21. F. Pope, Jr., Europe and Soviet Union Agricultural Situation; Midyear Report, ERS-For. 161 (P); 22. G. R. Kruer, Foreign Gold and Exchange Reserves; Reserves, Trade and Economic Growth in 1965 (M); 23. J. Kennedy and L. E. Moe (SM); 24. K. L. Bachman (SM); 25. R. K. Smith and H. R. Walker, Major Statistical Series of the U. S. Department of Agriculture: How They are Constructed and Used, Vol. 8: Crop and Livestock Estimates, AH-118 (P); 26. & 27. Economic Development Division, Rural People in the American Economy (M).

*Speech (S); published report (P); unpublished manuscript (M); special material (SM); \*State publications may be obtained only by writing to the experiment station or university cited.*



## GROSS INCOME FROM MEAT ANIMALS HIT NEW HIGH IN 1965

**NEW RECORD:** Meat animals supplied farmers with a record gross income in 1965 of \$13.3 billion, up 16 per cent from 1964 and 11 per cent above the previous high in 1962. Farm production of meat animals last year was 52.9 billion pounds, down 5 per cent from the

1964 record production. Cattle and calves accounted for 63 per cent of the total production, compared with 61 per cent in 1964. Hog production made up nearly 35 per cent last year, compared with 37 per cent in 1964. Sheep and lamb output was 2 per cent both years.

	Inventory, January 1			Production <sup>1</sup>		Gross income <sup>2</sup>	
	1964	1965	1966	1964	1965	1964	1965
<b>Cattle and calves</b>	1,000 head			1,000 pounds		1,000 dollars	
Texas	10,342	10,239	10,546	3,109,860	3,048,620	610,783	702,008
Iowa	7,124	7,338	7,191	2,973,825	2,773,905	970,539	1,073,077
Nebraska	6,048	6,100	6,191	2,241,940	2,143,380	597,375	680,064
Kansas	5,431	5,159	5,572	2,219,115	1,826,980	572,799	529,542
California	4,682	4,684	4,802	1,665,460	1,760,420	542,871	662,837
<b>Total U.S.</b>	<b>106,743</b>	<b>107,184</b>	<b>106,557</b>	<b>34,045,829</b>	<b>33,328,326</b>	<b>7,956,920</b>	<b>9,075,381</b>

Production in 1965 totaled 33.3 billion pounds, 2 per cent below the record 1964 output of 34.0 billion pounds. Gross income was \$9.1 billion, compared with \$8.0 in 1964. The average price for cattle in 1965 was \$19.90 per hundredweight (cwt.), compared with \$18.00

the preceding year. Calf prices averaged \$22.00 for 1965 and \$20.40 for 1964. Texas was the leading producer of cattle and calves in 1965. There 1965 prices averaged \$17.50 per cwt. for cattle and \$20.90 per cwt. for calves. Iowa continued to lead in gross income.

	Inventory, January 1			Production <sup>1</sup>		Gross income <sup>2</sup>	
	1964	1965	1966	1964	1965	1964	1965
<b>Hogs <sup>3</sup></b>	1,000 head			1,000 pounds		1,000 dollars	
Iowa	13,318	12,785	12,529	4,723,962	4,413,862	707,150	924,532
Illinois	8,130	7,480	7,106	2,940,381	2,615,828	448,560	552,192
Indiana	5,141	4,575	4,163	1,802,546	1,518,987	285,745	334,252
Missouri	4,207	3,828	3,713	1,496,750	1,322,156	228,324	272,303
Minnesota	3,437	2,990	2,721	1,360,268	1,148,352	207,385	243,673
<b>Total U.S.</b>	<b>58,119</b>	<b>53,132</b>	<b>51,230</b>	<b>20,294,323</b>	<b>18,221,301</b>	<b>3,129,124</b>	<b>3,838,513</b>

Last year's production of 18.2 billion pounds was 10 per cent below the 1964 output and the lowest since 1954. Gross income from hogs in 1965 was \$3.8 billion, up 23 per cent from the 1964 total. The

average price in 1965 was \$20.60 per cwt., compared with \$14.80 in 1964. Iowa led in hog production and gross income from marketings in 1965. Iowa prices also averaged \$20.60 per cwt for the year.

	Inventory, January 1			Production <sup>1</sup>		Gross income <sup>2</sup>	
	1964	1965	1966	1964	1965	1964	1965
<b>Sheep and lambs</b>	1,000 head			1,000 pounds		1,000 dollars	
Texas	5,185	4,790	5,154	144,251	159,186	24,323	23,356
Wyoming	2,241	2,153	2,109	86,822	86,103	17,207	20,012
California	1,767	1,758	1,699	99,096	98,751	24,355	27,426
Colorado	1,665	1,524	1,678	90,896	85,710	35,319	33,789
South Dakota	1,658	1,525	1,495	88,236	83,667	21,678	22,834
Iowa	1,312	1,326	1,187	81,419	73,127	28,991	28,202
<b>Total U.S.</b>	<b>28,021</b>	<b>26,590</b>	<b>26,452</b>	<b>1,348,392</b>	<b>1,313,853</b>	<b>330,083</b>	<b>344,661</b>

Production in 1965 was 3 per cent below the previous year and the lowest since 1949. Gross income was up 4 per cent in 1965 from a year earlier. The average price for sheep in 1965 was \$6.32 per cwt.,

compared with \$5.91 in 1964; lambs averaged \$22.70, compared with \$19.90 in 1964. Texas was top producer, but Colorado had the highest gross income when returns from lamb feeding operations were included.(1)

<sup>1</sup> Adjustments made for inshipments and changes in inventory. <sup>2</sup> Includes cash receipts and values of home consumption. <sup>3</sup> All hogs and pigs.



## Skillful Management Can Minimize Farmer's Losses in Bad Crop Year

Drought hits the Great Plains farmer harder in the pocketbook today than it did in the 1930s.

Increased cash spending for farm inputs is responsible. The expense is present regardless of crop yields.

But the farmer can minimize the effect of a bad crop year by skillfully developing his physical and financial resources and by economic management.

A great deal has been done about physical resource management since the droughts of the 1930s and 1950s. Farmers have come up with a number of alternatives for handling crops. Fallow is omitted if soil moisture is good. Land is turned to fallow in the spring by plowing under a winter-planted crop if moisture is low. And Southern Plains farmers may seed fallow land to grain sorghum in May or June if sufficient rain has fallen during winter months.

Erosion is being greatly reduced. This is done by stubble mulch tillage—leaving crop residues resting on the surface soil; by strip-cropping—alternating strips of seeded crop and summer fallow; and by emergency tillage—turning up moist clods to catch and hold drifting soil.

With erosion and soil problems fairly well under control, the farmer now needs to turn to the economic side of his operation. Here a number of strategies can be employed to assure financial stability over a period of time.

*Material reserves.* The farmer should keep some grain on hand for use in bad years. There are disadvantages: Grain is subject to loss from fire, theft or natural causes. Also, these reserves do not earn money, although they can be used as collateral for loans.

*Financial reserves.* Another type of reserve useful to the farmer is that which earns divi-

### No Sneezing Matter

Users of snuff no longer sneeze when they use it. The reason: Snuff is not inhaled into the nostrils as it once was; rather, a small quantity is placed between the lower lip and gum or between the cheek and gum.

And with the change in use has come a change in amount consumed. Per capita consumption of snuff in 1965 was about 8 per cent below 1964 and more than 30 per cent below 1955.

Snuff production has followed a similar pattern. Output in 1965 was 29.7 million pounds, a decline of about 1.7 million pounds or 5½ per cent from 1964 to a long-time low. Over a 10-year period, output has dropped 9.5 million pounds or nearly a fourth below the 1955 level. (3)

dends or interest while functioning as a reserve. These include money in the bank, government bonds, corporate shares or other negotiables.

*Bank credit.* A farm operator should have reserve credit available for emergencies caused by crop failure. This means that during good times he should not borrow all the money a bank is willing to make available to him.

*Variable debt repayment.* This is a new idea not widely used in U.S. commercial banking. In this plan, mortgage payments are adjusted annually in proportion to the farmer's income.

*Merchant credit.* Under this plan the farmer may postpone until after harvest the cash payments to fertilizer and other suppliers of farm inputs when crop yields are poor.

*Variable capital replacement.* Farmers should replace and repair machinery during years of profitable crops. This will cause business expenses to fluctuate more in harmony with income fluctuations.

*Crop insurance.* Insurance assures the farmer of a cash return even though his crops may fail. Two general kinds of insurance

are available to Great Plains farmers. One is the all-risk insurance offered by the Federal Crop Insurance Corporation which covers losses arising from all natural causes with amount of coverage limited to 75 per cent of the average crop yield. The other is hail insurance offered by mutual and private insurance companies.

*Custom hiring of production or harvesting services.* In custom hiring, the farmer pays an outside machine operator to bring his machine to the farm to plow, seed or reap. In case of crop failure, there is no crop to harvest and consequently no overhead expense on owned equipment.

*Renting farmland.* A farmer may wish to rent instead of own his farm because purchase payments often exceed annual rent. This is because rents are based on value projected indefinitely into the future whereas amortization payments are designed to retire the debt in 20 or 30 years.

Which of these strategies a farmer would use depends upon the individual situation. The young beginning farmer with very little capital would probably depend heavily upon rented land, merchant credit, crop insurance and custom hire of grain harvesting. The older farmer might rely almost entirely on accumulated reserves. (2)

## Declining Number of Cattle Following Trend of Previous Inventory Cycle

The upswing in the present cattle cycle peaked early in 1965 and cattle numbers have declined since.

There have been six complete cycles in the cattle inventory since 1880 when records of cattle numbers were begun. These cycles—from low inventory to peak inventory and back again—have varied in length from 10 to 16 years.

The peak in the current cycle—the seventh—was passed at the beginning of 1965 when a record 107.2 million cattle and calves



were on farms. A 600,000 reduction was noted this January.

The current cattle inventory situation is similar to the one that occurred during the preceding cycle of 1949-58. Dairy animals accounted for all reduction in inventory during the first year of the downswing in cattle numbers in both cycles.

But while the inventory situation is similar, two factors in the current cycle are different. First, prices declined in 1955 and 1956, but in 1965 and early 1966 they averaged substantially above 1964 figures. Second, weather is much more favorable in this cycle. In the 50s there was a drought. (4)

### **Cattle Feeder Operations Usually Run Full Capacity to Spread Costs**

Cattle feeders are in the business of producing high quality beef. To do this, young animals are purchased and fed a high energy ration for several months. They usually go directly from the feedlot to slaughter and in a few more days to retail stores.

Cattle feeders have three major concerns: feeder cattle prices, future fed cattle prices and the cost of converting feed into beef. Feeders make profits when either the cost of putting on a pound of gain is below the market price of finished cattle, or when fed cattle prices are higher than feeder cattle prices were at the start of the feeding program, or both.

The weight and quality of the feeder animal largely determines how long a feeding period is required. Fleshy steers weighing 800 pounds and up when they go into the lot are often fed for only 100 days or less. Lightweight steers are sometimes fed for as long as a year.

Cattle feeders typically operate their lots at or near full capacity. This lowers the cost of buildings, equipment and sometimes labor per animal fed (or per 100 pounds of gain). It also helps average

out low periods of income.

Many cattle feeders will continue to feed cattle when the price outlook is not considered favorable if they can more than recover their variable costs (day-to-day expenses). In this way, losses can be held to a minimum. (5)

### **Cattle and Coastal Bermuda Grass Profitable Duo for Delta Farmers**

Increasing forage output and adding a cow-calf enterprise can pay off—sometimes handsomely—for farmers in the Yazoo-Mississippi Delta.

A series of budgets prepared by economists in the Economic Research Service and the Mississippi Agricultural Experiment Station showed that crop-livestock combinations could generate substantially higher incomes for Delta farmers in the years ahead.

Under the most profitable crop-livestock plans for five typical resource situations, returns to land, management, and overhead could be increased by about 15 to 17 per cent on sandy farms, 22 per cent on levee farms and 74 to 102 per cent on clay farms in the Delta.

The optimum plans call for the systematic conversion of marginal cropland and summer sod crops to Coastal Bermuda grass. This would enable Delta farmers to expand the quantity and quality of their forage. This means they can add or expand a cow-calf enterprise. Herd sizes could be increased by some 67 to 78 per cent on small farms, by 146 per cent on large farms by grazing cattle intensively on Coastal Bermuda grass.

A major portion of the better cropland would still be planted to cotton under the optimum farm plans. However, soybeans would become a more important enterprise on clay farms, replacing both corn and oats in the cropping pattern. On sandy and levee farms, oats would figure promi-

nently, replacing all of the corn and a portion of the soybeans now being grown. This is because improved practices on sand and loam soils can boost grain yields substantially. And farmers can also use oats for supplemental grazing in spring and late fall.

A word of caution, however, was added by the economists who prepared the budgets. The Delta farmers who do decide to switch to the optimum crop-livestock budgets cannot expect their receipts to soar overnight.

The transitional period from the general situation at present to optimum organizations in the Delta would likely vary from six to 10 years, depending on the sod crops currently being grown and the level of grazing intensity used. It takes at least two years to develop a good stand of Coastal Bermuda grass—which is why the transitional period is long. (6)

### ***Farm-Mortgage Loans Up***

Farm-mortgage loans made by the three reporting lender groups increased in the last half of 1965 by over \$1 billion. That's a hike of 6 per cent over the corresponding period a year earlier. For the year as a whole, the loan volume of \$2,354 million was 15 per cent greater than during 1964.

The reporting lenders were 20 life insurance companies, the federal land banks and the Farmers Home Administration (direct loans only). Loan volume was computed from new lendings plus increases in existing loans.

The volume of loans made by the insurance companies and the banks was 8 per cent larger in the last half of 1965, compared with the same period in 1964. The amount of direct loans made for farm-ownership and rural-housing purposes by the Farmers Home Administration was down 15 per cent in the last half of 1965 from a year earlier, but for the entire year 1965, loan volume was up 8 per cent from the previous year.

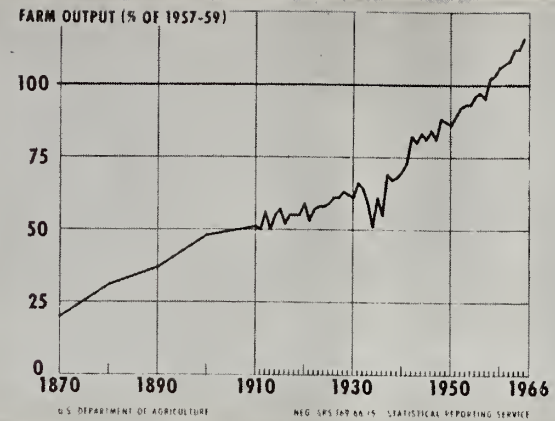
The number of delinquent loans held by the three lending groups remained at low levels. (7)



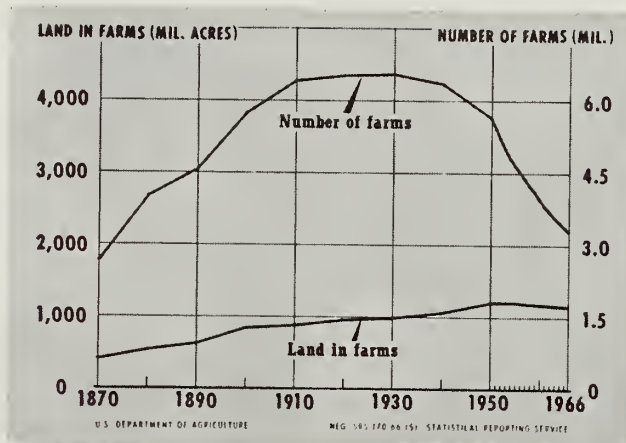
# A CENTURY OF STATISTICS

For 100 consecutive years, the U.S. Department of Agriculture has been gathering data and releasing summaries of crop conditions and annual totals of livestock on farms, acreage, yield and production of major commodities. The Statistical Reporting Service (SRS) now publishes more than 700 statistical reports each year in Washington and the state offices. These field offices are operated by SRS in cooperation with the state governments. The basic data illustrated in the following charts were provided by reports submitted voluntarily and without pay by operators of farms, dairy plants, mills, elevators, warehouses, meat-packing plants, gins, hatcheries and other agricultural-related businesses. Data provided by SRS is analyzed by ERS to explain and predict trends.

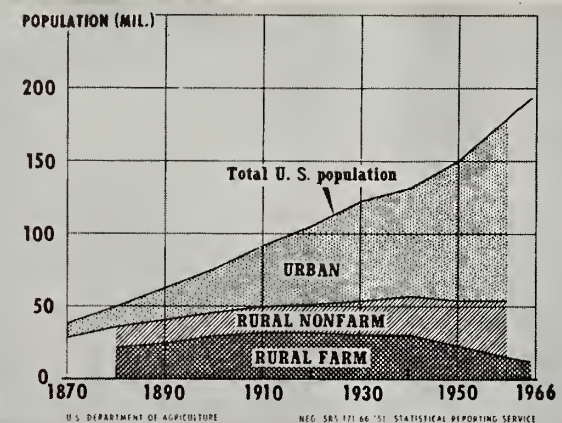
These charts show major trends in agriculture over the century. Indicative of the computer age, the charts were compiled by electronic data plotter in Washington Data Processing Center. (8)



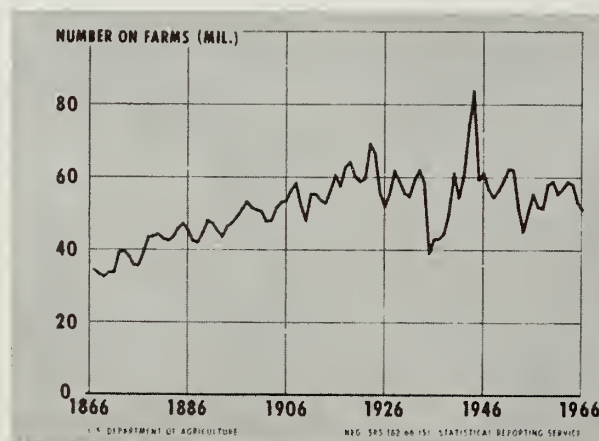
**FARM OUTPUT:** The index of farm output (1957-59=100) displays a steady upward trend, moving from less than 25 in 1870 to nearly 120 by 1965. The drought in the early 1930s produced the only significant period of decline in farm output. Output since 1940 is up rather sharply.



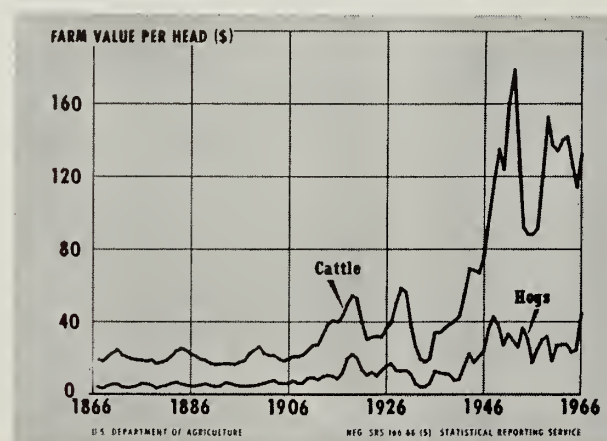
**FARMS AND LAND IN FARMS:** Farm numbers more than doubled between 1870 and 1910, from less than 3 million to more than 6 million. Big reason was the westward expansion of agriculture. Thereafter, the rate of increase in farm numbers was relatively stable, until the 1930s. The downtrend that became evident about 1930 sharply accelerated after 1950. Farms were down to slightly more than 3 million by 1966, not much above the level of 1870. The reduction in farm numbers is due largely to the consolidation of farms into bigger, more efficient units, as well as some change in farm definition. Land in farms continued to expand from 1870 to 1950. Since 1950 farmland has declined moderately for use in industrial expansion, highway systems and urbanization.



**U.S. POPULATION BY RESIDENCE:** The U.S. population of less than 50 million in 1870 expanded at a steady rate until 1930, slowed during the 1930s, but accelerated after 1940. By 1965 the total approached 200 million. Farm and other rural people accounted for a majority of the population in 1870. By World War I, the urban and rural populations were about equal. After that the number of city people continued the rapid increase while the rural population made only minor gains. By the mid-1960s urban residents outnumbered rural by about three to one. Farm population outnumbered rural nonfarm in the late 1800s and early 1900s. By 1960 there were about twice as many people living in rural areas who didn't farm as there were people engaged in farming.

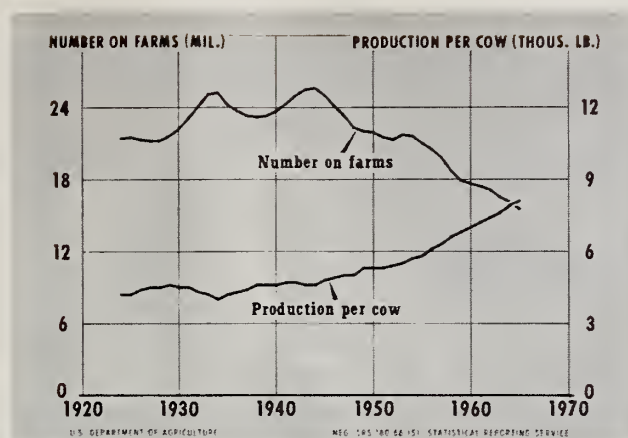


**HOGS, JANUARY 1:** Hogs on farms rose from about 34 million head in 1867 to a level of nearly 70 million in 1923. Several sharp annual reductions lowered the number to less than 40 million in 1935. Marked expansions in the early 1940s pushed the number to a record high of 84 million in 1944. During the early 1960s, there were about as many hogs on farms as there were in the early 1900s.

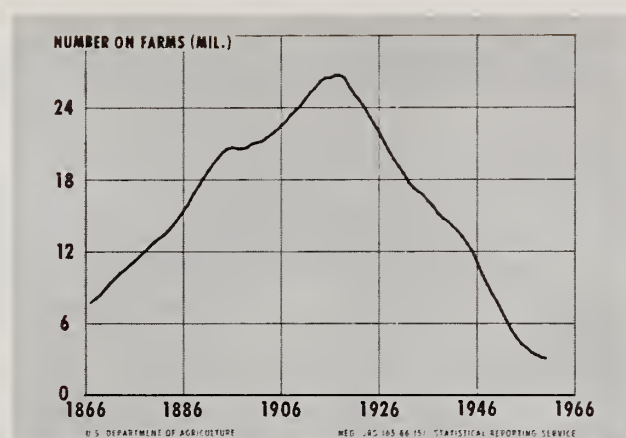


**CATTLE AND HOGS, VALUE PER HEAD, JANUARY 1:** Farm value of cattle per head made only moderate increases and remained mostly below \$40 until the breakthrough in 1940 when they climbed rapidly to a record \$179 in 1952. Value of hogs per head held around the \$5 to \$6 level from 1867 until World War I. It jumped to \$22 in 1919 and again in 1943. Value reached \$42 in 1948 and a record high \$45 in 1966.

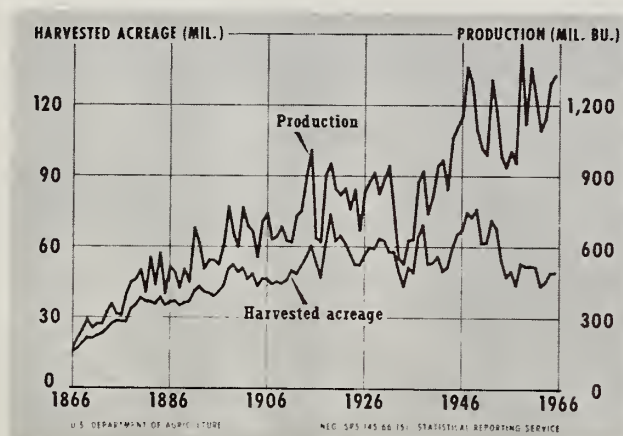




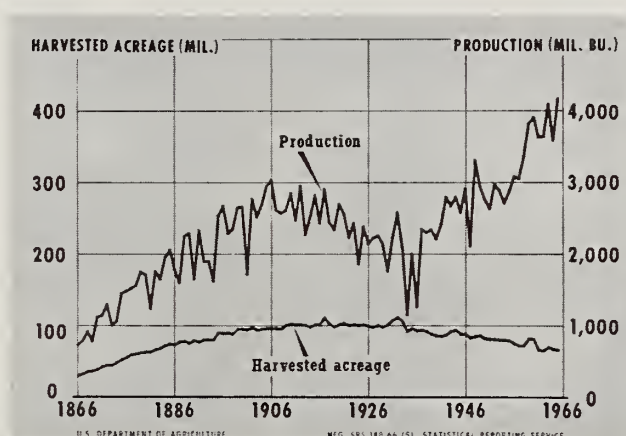
**MILK COWS AND PRODUCTION PER COW:** Milk cow numbers peaked at nearly 28 million in 1945 and have declined to about 17 million. Milk production per cow has increased since the mid-1930s to a record high of about 8,000 pounds in 1965 and is continuing to increase.



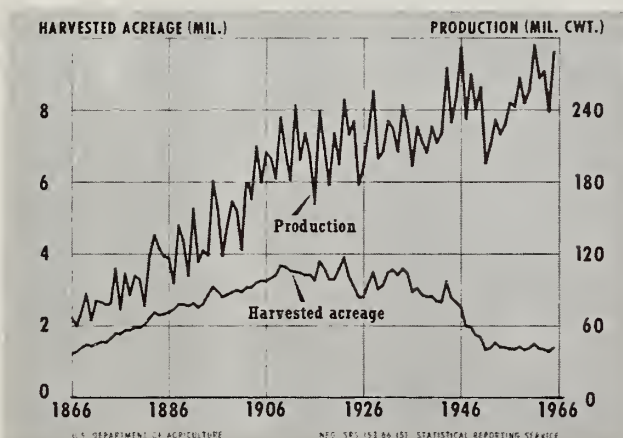
**HORSES AND MULES, JANUARY 1:** Numbers of horses and mules more than tripled from 1867 to the peak of nearly 27 million head in 1918. Numbers then declined steadily to about 3 million head in 1960 when estimates for horses and mules were discontinued.



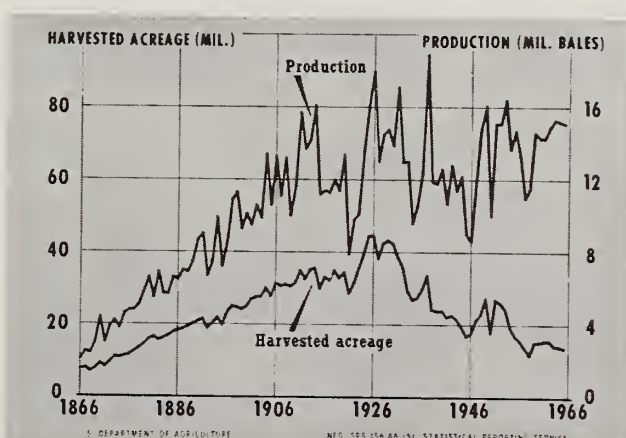
**WHEAT:** Most of the wheat acreage harvested in 1866—more than 15 million acres—was east of the Mississippi River with heaviest concentrations in Illinois, Indiana, Ohio, Michigan and Wisconsin. Each of these states had more than a million acres. Wheat then expanded to the West with the U.S. total reaching a high of nearly 74 million acres by 1919. Acreage again increased following World War II to a peak of nearly 76 million in 1949. Wheat yields fluctuated in the 12 to 16 bushel range until about 1940 and production generally followed the changes in acreage. After 1940 yields trended upward, reaching a high of 27.5 bushels in 1958. In 1944 production passed 1 billion bushels and has rarely fallen below since. It reached a record of 1.5 billion in 1958.



**CORN:** Corn production has increased nearly sixfold in the past 100 years. But during the same period acreage harvested has gone up only twofold. Acreage increased nearly fourfold during the first two-thirds of the century, but declined during the last one-third because of shifts to soybeans and other crops as well as other land use programs. Production increased more rapidly than acreage during the first half century as the crop spread into new and more productive areas. Production declined during the 1920s and dropped sharply with the widespread drought conditions in the 1930s. Rapid improvement in crop varieties and cultural practices pushed production sharply upward in the past quarter century, to a record 4,171 million bushels in 1965.



**POTATOES:** Acreage harvested at the beginning and at the close of the first century of continuous data was practically the same. During the first half of the 1900's, acreage rose to an all-time high in 1922 of 3.9 million acres. Then it turned downward during the last half of the century, stabilizing about 1950 at 1.4 million acres. Production climbed steadily during the century, peaking at 294 million hundredweight in 1961.



**COTTON:** After the Civil War, cotton acreage expanded steadily from about 8 million acres to a record high of 44.6 million in 1926. It then declined to about 14 million acres in the mid-1960s. Cotton production moved westward during the expansion and Texas became the top producing state. Cotton production rose along with acreage moving from about 2 million bales in 1866 to a record high of 19 million in 1937.



## Value of Land Often Depends Upon What Owner Intends to Do With It

Land is a versatile commodity. It's the makings of a farm or a summer home. It's the start of a suburban development, a shopping center or a new factory.

The value attached to the land varies according to the way it's used, or, as is often the case these days, the way it may be used in the future.

There is more than a little guesswork as to what the value of any particular tract will be in the future. But some of the general forces that have helped set trends in land values are quite clear. The trend setters are the growth in population, the impact of the general rise in prices, developments in the technology of farming and a "psychological factor."

*Population growth.* Many people assume that the price of farmland almost has to rise. The reasoning goes like this: The supply of land is fixed. The population is not. More people will need more food and fiber and that will take more land.

But domestic demand for food and fiber increases at 1.7 per cent a year—substantially less than the potential increase in farm output.

The technological "explosion" of the past decade is expected to continue to contribute to higher yields in the future at a faster rate than population growth.

There is more than enough land to meet domestic needs. Or, to put it another way, the amount of land in terms of the *economic* supply, unlike the *physical* supply, is increasing more than fast enough to keep up with likely domestic needs.

However, the economic supply of land becomes a far more uncertain thing when future export needs are set into the equation. It is, for instance, hard to estimate the amount our exports may expand. It is equally hard to guess

how much our foreign competitors will step up their own export trade.

But the current world need for food, combined with increasing population, points to continuing increases in U.S. agricultural exports. These have already doubled in the past 15 years to \$6.2 billion in 1965.

*Impact of the general price level.* History lends strength to the proposition that the price of land will keep pace with prices in general. But history deals in averages and the rule, though accurate enough in general, applies mostly to land with a marked potential for nonagricultural uses.

If the principle were to be valid for farmland, too, net income per acre would have to keep pace with the general price level.

In the 1950s farm prices actually dropped; returns to agriculture stayed about the same throughout the decade. Per capita earnings in the nonfarm sector increased 37 per cent for the period; incomes of the farm population from farming only half as much.

Another complication in predicting future land prices is the presence of the long-term investor.

This type of buyer is apt to be someone in the upper income brackets. He prefers such investments as land or common stocks which pay off in terms of capital appreciation that is taxed at a lower rate than is ordinary income.

And as long as he holds some of the land, the supply available for sale is reduced. This, of course, puts further upward pressure on land prices.

Another pressure on land prices is the spread of suburbia. But while the market behaves as if land near big cities will continue in great demand, future land use may not be as lavish for residential purposes. High-rise apartments are increasingly taking the place of the single family unit. Land in downtown areas is likely to be increasingly "reused" be-

cause of its superior location. Some 40 per cent of all new dwellings being built today are multiple units.

*Technology.* More efficient tractors, more and better fertilizer, seeds and know-how end up as part of the capital worth of farmland. The main reason they do is because of the existence of farm programs.

Such programs, by maintaining prices, help to build the value of the improved technology into the value of the land. Without support programs—in a free market—an increase in output tends to reduce the price of the commodity. Land would tend to provide the same net return after a yield increase as before and land prices would not rise.

Since land is generally the limiting factor in increased farm production (inputs such as fertilizer and tractors are available in ample supply), land values increase as the production potential rises, so long as prices are maintained.

Technology can affect land prices in another way. The larger farmer, using the best farming methods, generally realizes higher-than-average returns per acre. When he buys additional land, he can afford to pay a relatively high price for the land. The smaller farmer has to pay the same price, even though his earning potential is not nearly as high as that of the larger operator. As a result many farm units become overvalued in relation to the small farmer's earning potential.

*The psychological factor.* A lot of people simply like to own property. Today's rising incomes mean that more people can afford their own "piece of land."

In economic terms, land has become a durable consumer good. Its value is quite apart from the ability of land to produce income. This kind of value has again widened the gap between capitalized values, based on conventional earnings, and market prices. (9)



# THE RURAL METAMORPHOSIS

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*Back in 1790 virtually all Americans were rural residents and all rural residents were farmers. Not so today. In the past 50 years rural America has undergone a striking transformation in both population and occupation.*

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No matter how wide the camera lens, 196 million people are too many to fit into a photograph. The population census is the closest we can get to our family portrait.

We have been adding to the nation's picture album since 1790, when the first census showed 19 out of every 20 Americans living and working in rural areas. And in that era, rural residence was synonymous with farm residence.

Since then, the family has aged a little and changed a lot.

Today, only six out of every 20

Americans live in rural areas. Only a fourth of the rural residents are farm people.

It isn't surprising that there have been radical changes during the better part of two centuries.

But a closer look at our statistical profile shows that the biggest and most important alterations in the face of the nation have occurred in the past 50 years.

The city population, for example, first edged past the rural populace in the 1920 census when city dwellers totaled 54.3 million

and country people numbered 51.8 million. And within the rural population, it wasn't until the 1940s that the shift from farm to nonfarm status began in earnest.

World War II demanded rapid mechanization on the farm, a vast expansion of industry and more factories in rural areas. The result was that a net of over 11 million people moved off U.S. farms between 1940 and 1950. But with more industrial and other off-farm work available in the countryside, the nonfarm





rural population rose substantially. From less than half the total rural population in 1940, the nonfarm population swelled to about 60 per cent in 1950.

Since 1950 the rural population has remained around 54 million, with the nonfarm portion steadily rising, the farm segment shrinking.

A net average of nearly 1 million persons moved away from farms annually in the 1950s; the annual rate of net off-farm migration was 5.3 per cent. Since 1960, the average number of net off-farm migrants has dropped to 794,000 a year. But with a smaller farm population to begin with, the rate of net out-migration has climbed to 5.7 per cent a year. Farm residents, amounting to 23 million in 1950, totaled only 12.4 million in 1965, or less than 25 per cent of the rural population.

*Age.* The most recent head count in 1960 showed that we are still a young people. Median age for the entire population was only 29.5 years. Back in 1950 our median age was 30.2 years. Our rejuvenation resulted from the sharp increase in the number of babies born after World War II.

Both the urban population and the nonfarm portion of the rural population experienced a decline in median age. But the farm population got older as young adults moved out of agriculture.

Between 1950 and 1960, median age of persons living on farms rose from 26.3 to 29.6 years. There were still a large number of children up to 18 years of age, but the 18- to 34-year-old young adults made up a decreasing part of the population.

The 60- to 69-year-old farm people slightly outnumbered 20- to 29-year-olds in 1960. It was just the other way around off the farm. The young people outnumbered the oldsters by 80 per cent in the nonfarm portion of the rural community and by 65 per cent in the city.

*Race.* At the turn of the cen-

tury, more than three-fourths of the nonwhite population lived in the country, mostly on farms. The situation had reversed itself by 1960. Just about three-fourths of the 20.5 million nonwhite Americans lived in cities.

Massive migration of nonwhites since the war caused the shift. To a greater extent than among white farmers, when nonwhites leave agriculture they generally abandon the countryside.

*Occupation.* The census camera revealed more blue collar workers than farm workers in the rural labor force in 1960.

Manufacturers employed slightly more than a fourth of the 14.1 million rural labor force who

didn't live on farms in 1960. Service industries — domestics, teachers, entertainers, hospital workers and the like—also supplied about a fourth of the jobs to the nonfarm workers. Trade amounted to about a fifth. Of the 4.8 million farm residents in the 1960 labor force, 60 per cent was employed in agriculture. The rest of the farm residents worked in the manufacturing, trade and service industries.

*Unemployment and underemployment.* In 1960 the unemployment rate in the nonfarm rural labor force was 6.1 per cent, compared with 5.1 per cent in the urban sector and only 3 per cent in the farm sector. (The labor force includes persons 14 years and older who worked or actively looked for a job.)

The exceptionally low rate of unemployment for the farm population is something of a distortion of reality, masking, as it does, a very high rate of *underemployment*. Most farm operators report they are employed even when they may be doing only a few hours of work a week during the off season. And underemployment can take the form of producing very little in the working hours.

The unemployment equivalent of underemployment amounted to 2.5 million man-years in 1960 for rural workers between 20 and 64 years of age, according to ERS specialists. To get this estimate, the researchers compared actual earnings of persons in the rural labor force with their earning potential based on age, sex, education and other characteristics.

Nearly 1.1 million man-years of the rural underemployment were assigned to farm workers. Thus, about a fourth of the labor force living on farms in 1960 was underemployed, considering only the 20- to 64-year-old workers. The 1.4 million man-years among the nonfarm workers in rural areas amounted to 12 per cent of this labor force in the same age group.

*Income.* Nearly half of the U.S.

### *The Rural/Urban Essence*

Manhattan Borough, New York is the epitome of the urban; a cattle ranch in the sand hills of Nebraska is unquestionably rural.

But what of the military installation in the open country that contains thousands of men and hundreds of dependents, has its own streets, stores and other typically urban services?

What of the farms that lie in a township of 2,500 or more persons that has incorporated as a municipality to avoid annexation by a neighboring city?

Rural America, as defined by the Census Bureau, includes all open country and towns of less than 2,500 inhabitants. Thus, in census terminology, the military installation is rural; the incorporated township farms, urban.

Though many Americans today live in areas that grade subtly from rural to urban, the essence of rurality is low population density.

In 1960, the most recent census year, the average population of rural America was 15 persons per square mile. Urban areas, in contrast, averaged 3,113 persons per square mile.

And though 70 per cent of the U.S. population was urban in 1960, urban areas occupied less than 1 per cent of our total land area. It is estimated that by 1980, 75 per cent of the population will still occupy only 2 per cent of the land. (26)



families who had incomes of \$3,000 or less in 1960 were rural people, about 16 per cent of them living on farms. The average income of farm families that year was only 57 per cent of the U.S. median family income of \$5,660; nonfarm rural family incomes were about 84 per cent. (10)

## The South, Last Rural Stronghold, Became Predominantly Urban in '60

There are more urban Americans today than rural residents. This has been true for the nation as a whole for decades. But by region, the move to cities has occurred at different times.

City people have outnumbered rural residents in the Northeast since 1880. The North Central Region and the West have been predominantly urban since 1920. The South, however, did not become predominantly urban until 1960, following a decrease of 40 per cent in its farm population during the decade of the fifties.

In 1960 the only geographic division in the U.S. which still had more rural than urban residents was the East South Central—Kentucky, Tennessee, Alabama and Mississippi.

Despite the overall trend to urbanization, many states increased their rural population in terms of absolute numbers during the '50s. The gains were the result of both natural increases and in migration.

Gains of more than 10 per cent in the rural population were noted in Florida, California and Nevada between 1950-60. Increases were also widespread in the rural areas surrounding the large industrial centers of the Lower Great Lakes States and the Atlantic Seaboard.

For the most part, areas where the total rural population swelled still had a large drop in the farm population between 1950-60. However, agriculture was not the principal rural activity in such areas and increases in the number of nonfarm rural people more than offset farm losses. (27)

## People on Farms Average About 4.6 Per Cent Annual Decline Since 1960

Farm population is continuing its long-term downward trend.

The number of farm residents for 1965 has been estimated at 12,363,000, a drop of 591,000 from a year earlier. Figures are an average for a 12-month period centering on April.

The farm population is 6.4 per cent of the total U.S. population. Since 1960 the number of people living on farms has dropped by about 3,272,000 for an annual decline of about 4.6 per cent. Nearly 1 million people of all ages left farms in 1965. This outmigration was somewhat offset by 275,000 persons who returned or moved to farms. And natural increase of births over deaths added another 112,000 to farm rolls.

Farms now have a smaller proportion of children under 14 years and a higher proportion of adults 45 years old and over than at the beginning of the decade. Reason for this is the continuing migration of young adults from the farm.

Nonwhites are 12 per cent of the total farm population. Their number is declining at a much faster rate than for whites. Between 1960 and 1965, nonwhites

on farms decreased by 41 per cent, compared with a decrease of 17 per cent for whites.

A high ratio of males to females continues to be a distinctive feature of the farm population. In 1965 there were 108.4 males for every 100 females in the farm population. (11)

## Most Farmers Expect to Retire, But Only a Fourth Have Definite Plans

Although approximately two out of five farmers, according to the latest census figures, are 55 years old and over, few have given much thought to retirement; fewer still have made definite plans.

Feelings of farmers toward retirement were obtained by ERS, in cooperation with South Dakota State University, from 575 farm operators in eastern South Dakota.

The interviews showed that 25 per cent of the farmers had definite retirement plans; 60 per cent expected to retire but had no plans; and 15 per cent said they would never retire.

The current financial position of the farmer and his anticipated income at age 65 bore significantly on retirement plans. Nearly one-third of the farmers with a net worth of \$42,000 and over had definite plans, compared with only a fifth of those with less than \$20,000 net worth.

Some 79 per cent of the farmers questioned expected to continue some physical labor after retirement. Half gave farm work as their first choice. Average preferred age for retirement was about 62. Preferred age did not exceed 65, however.

A change of residence was being planned by 64 per cent of those farmers who thought they would eventually retire; 37 per cent of them wanted a smaller farm or a nonfarm residence in the open country. Most of the rest wanted to live in a community of under 2,500 population. (13)

### *The Seniors' Slant*

Older rural women have a brighter attitude concerning family acceptance of senior citizens than their urban counterparts.

Recent interviews of rural and urban women aged 60 to 64 and 75-plus showed half the rural women in both age groups thought that young people like to have oldsters around. Only one-third of the urban women in their sixties and one-fourth of the older group agreed with them.

And though more urban than rural women lived with their sons or daughters, fewer urbanites than rural women felt old people were better off if they lived with their children. (12)





## *Flowers:*

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### *what makes the sales bloom?*

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*More money, more people, more purchases of electric shavers—any one of these changes can turn up in the sales sheets for the retail florist. Some may be a plus for the trade, but all complicate the research into advertising effects.*

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Most Americans don't seem to think of fresh cut flowers as part of day-to-day living. We tend to call on the florist only for weddings, anniversaries, funerals and three holidays—Christmas, Easter and Mother's Day.

This leaves a lot of unused days on the floral calendar and florists are looking for ways to increase sales year round.

An obvious recourse is advertising. But how do you trace increased sales, if any, back to the effect of an advertising program?

Since flowers are as much an agricultural commodity as wheat or soybeans, ERS economists



studied the problem. They analyzed nationwide sales trends over a 26-year period for a leading flowers-by-wire service and retail sales in nine large cities and seven medium-size ones.

For each of these groups they compared sales with changes in the labor force, personal income and the business done by the florist's gift and remembrance competitors—the confectionery and small home appliance industries. These are the factors that increase, or decrease, florists' sales whether they advertise or not. And sales increases due to these factors have to be accounted for before the effect of an advertising campaign can be assessed.

For nationwide sales by wire, they found that for every 1 million employees added to the labor force annually from 1935 to 1965 (1941–45 not counted), orders for flowers have risen by 130,000; since 1947 they've gone up at the rate of 165,000 for each 1 million new employees. Since 1947 every \$1 billion increase in disposable income has added 18,000 more orders for flowers.

Because people tend to think of candy and small home appliances, along with flowers, as suitable gifts or remembrances, sales by these competitors of florists have to be considered, too.

Researchers find that florists' sales tend to fall by 10,000 orders for every \$1 billion that consumers increase their spending for candy and other confectionery products. Similarly, for every \$1 billion more they spend on radios, electric shavers and other small appliances, consumers cut back flower orders by 4,000. Our disposable income climbed \$30 billion from 1964 to 1965 and it's this income that's likely to influence spending for flowers in 1966. Assuming normal changes in employment and competition from candy and appliance sales, wire service florists can expect a half million more orders this year than last because of higher income.

This becomes the take-off point for judging the effect of an advertising or promotion campaign. Economists estimate that a 4 per cent or more change in wire service orders over and above that which may be attributed to the above factors can pretty well be ascribed to the successful effects of advertising.

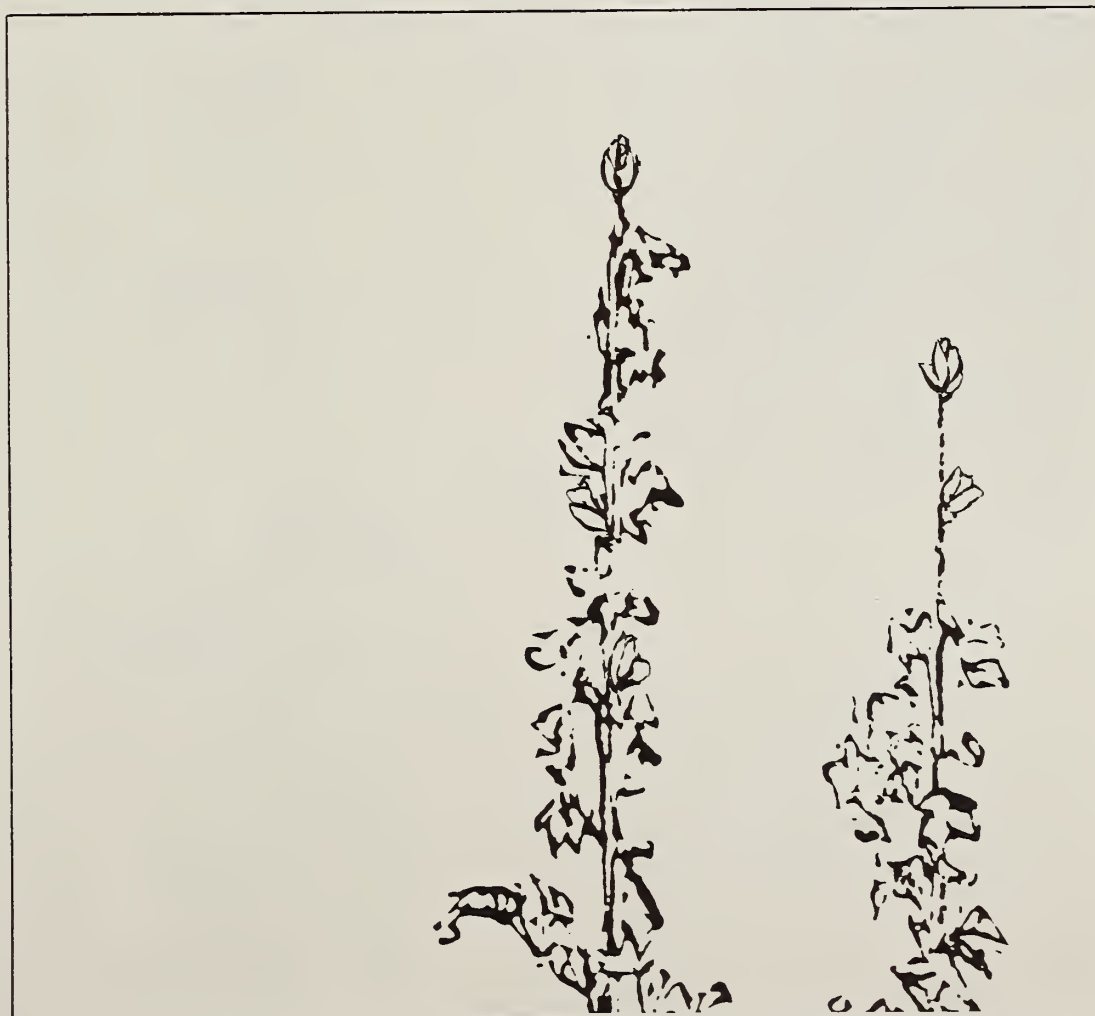
Big city florists can use increases in population and general merchandise spending as a guide to what they can expect in increased sales. For every 1 per cent increase in residents, outgoing wire service orders climb .94 per cent; when people buy 1 per cent more general merchandise they buy .34 per cent more flowers.

Analysis shows these gauges come within 10 to 11 per cent of estimating actual sales in any year. Thus, as opposed to the 4 per cent increase needed to measure a national advertising campaign, local big city advertising would have to hike sales more

than 11 per cent before they would be a measurable quantity.

For selected medium-size cities researchers found that outgoing wire orders for flowers climb nine times faster than the number of new businesses, a third as fast as new resident telephone customers and a third as fast as general merchandise sales. However, these factors failed to explain a sizable amount of the variation in year-to-year sales for the medium-size cities included in the recent study.

In both large- and medium-size cities changes in income, population and spending patterns should be valuable to florists as indicators of expected increases or decreases in wire service sales. But because of variations in sales that aren't explained by such variables, refinements in measurement techniques are probably needed to detect a realistic sales response to advertising and any of the techniques used for promotion in these cities. (14)





## Flowers, Mainly a Family Enterprise, Still Worth \$1 Billion to the Trade

To the Japanese, the complexities of a traditional flower arrangement suggest the sky, the land, the sea and an entire way of life.

For much of the western world, the crocus has been the herald of spring; the flaming pyracantha berry has signaled the festivities of fall and winter.

And for the romantic, the lily has long stood for purity, the violet for modesty, the rose for love and beauty.

But to the 12,000 or so men who grow the masses of dazzling color, the main symbolism of flowers is their \$300-million-a-year sales value.

The 22,000 retailers in the country look on cut flowers and plants as a commodity worth in excess of \$1 billion a year.

That \$300 million wholesale value means floral products are an agricultural commodity of somewhat greater importance than apples and many another crop.

In order to give the florists more factual information to improve industry growth and performance, ERS economists recently conducted a survey of current retail practices.

Two out of three florists, according to the study, have sales of less than \$50,000 a year. About one in four has annual sales of between \$50,000 and \$100,000. Each of the two groups accounts for slightly above 30 per cent of total sales for the industry.

This leaves nearly 40 per cent of the total business to the one out of nine florists who has annual sales in excess of \$100,000 a year.

Large or small, the vast majority of the florist shops are managed by the men who own them. Only about one shop out of 11 is run by a hired manager, and he shows up primarily in the large shops.

As for the staff, few employees

receive formal training, with only about a fourth of the florists providing it. Not surprisingly, the big shop is far more apt to offer such training than is the small one. The small shop is commonly a family enterprise. They have been in the business long enough, apparently, to feel that the family workers know the trade.

In good part, flowers are a service product. Eight out of 10 florists offer flowers-by-wire service for their customers. Unquestioned credit and free delivery are both almost universally provided. In fact, the policy of service extends well beyond the actual sale.



Only one out of 10 retailers adds a service charge to past-due accounts.

But generous as the retailers are with credit to the customer, wholesalers are even more liberal. Only one florist in 15 is penalized when he doesn't pay his bill on time. Over a fourth of the retailers get a discount if they pay promptly.

Credit isn't the only service the retailers get from their suppliers. The wholesalers also act as the main source of such information as the volume of plants and flowers available in the market. And despite the informality of such market news, only one florist in nine is dissatisfied with the system.

They seem fairly content, too, with their shops. Less than two-thirds of the stores have been remodeled in the past decade. Moreover, most of the work was to add space rather than to modernize or redecorate.

How does the florist gain the customer's attention? Over three-fourths of the florists do some advertising, though less than 40 per cent make a practice of featuring specific plants or flowers. When they do feature them, it is most often in the newspapers.

As for merchandising within the store itself, most of the retailers use the built-in attraction of the flowers and plants to stimulate sales. But relatively few of the shops display examples of formal arrangements to let the customer see what he can buy.

Over three-fourths of the florists with arrangements on display put a price tag on them for the customer to look at.

About a third of the florists charge the same price, whether the flowers are sold loose or in an arrangement, picked up at the store or delivered.

Most of the florists use window displays to stimulate sales; they consider customer traffic in the store a further sales boost. (15)



## Needed Reserves for Milk Handlers May Equal More Cost Than Profits

Enough isn't enough. Not in the milk business, anyway.

Milk handlers have to maintain reserve stocks just to be sure the customers will get all the milk they want.

The situation is the result of trying to coordinate milk production—with its annual cycle of high and low output—with milk consumption having its own highs and lows.

ERS researchers recently took a look at the market for milk in the Pittsburgh area. In particular, they wanted to measure the way reserve supplies and surplus stocks affect market efficiency. The Pittsburgh market is unusual in the degree to which individual handlers procure their own milk supplies. (See page 10 of the January 1965 *Farm Index*, for a study of centralized supplies in the Tulsa-Oklahoma City market.)

The handler, according to the study, carries a relatively large reserve when he takes on the job

of coordinating his own supply with demand. A central coordinating agency—most likely a cooperative—could provide adequate reserves for a number of handlers in the area with far less milk.

Just what this could mean for individual handlers in the Pittsburgh area shows up in one set of figures—weekly milk receipts for seven handlers in the area.

Receipts fluctuated 21 per cent less when the volume (for the seven) was combined than it did when the plants were considered separately.

A central source of supply for the handlers could have provided each of the seven plants with a sufficient volume of milk while maintaining only 60 per cent of the weekly reserves they needed individually.

The reserves are maintained to cope with the fluctuations in demand and supply, with changes in supply far more pronounced on the average than changes in use.

But for individual plants utilization trends may be anything but even. Sales curves for the dealer who supplies a school or a retail chain can change abruptly if a contract is cancelled.

Two-thirds of the surplus for these plants was the result of changes in consumption. And for another two plants, changes in sales were about equally important as changes in supply.

When the figures are combined however, the changes in producer receipts are about three times as important as the changes in the relatively stable pattern of fluid milk use.

Thus, two of the plants in the study were more troubled by changes in sales levels than in producer receipts.

Despite these vagaries of producer or consumer, a 5 per cent reserve would have covered all of the week-to-week changes for the seven plants when their volumes were combined on paper. It takes a 20 per cent reserve to meet the

needs of the same plants when they procure their own milk supplies.

But it isn't all gain. And the firm that might lose the most is the one with the most efficient procurement operation. Obviously, a coordinated supply would wipe out this advantage over the competition. So, too, for the firm with an outstanding program of quality control. Again, the competitive advantage is lost with no offsetting gain.

By the nature of the arrangement, a centralized supply means the processor must relinquish any direct control of the quality of milk he handles. (17)

## Cost of Marketing Widens for Cheese, But Narrows Recently for Ice Cream

Until the recent climb, farm prices for fluid milk had been staying fairly steady, while retail prices were climbing. From 1954 to 1965 farm prices for bottling milk were virtually level; retail prices continued to rise until 1961 when they evened out. The result was a widening of the farm-retail margin.

*Processed cheese*—the dairy product with the greatest rise in retail prices and marketing margin during the post war period. Consumer demand for cheese rose more rapidly than for any other dairy product. Though prices paid to the farmer for milk going into cheese have been somewhat firmer than for other manufactured dairy items, most of the increase in retail prices went to the marketing system.

*Ice cream*—at the other extreme. The shift from drugstore sales to supermarket, from small hand-packed sales to factory-packed half gallons, from old-fashioned ways to automated processing lines and the emergence of adequate refrigeration, from factory to household—all together reduced retail prices and marketing margins between 1951, when the data series began, to 1965. (19)

### *Fashion from the '20s*

Not since 1920, which launched the era of the flapper, Mah-Jong and trans-Atlantic flight, have Americans smoked as many cigars as they did in 1964, the year following the Surgeon General's report on smoking and health. The report indicated there was less risk in smoking cigars than cigarettes.

The nation's men lighted 9.1 billion cigars in 1964, some half billion more than 1920's record and a full 2 billion more than in 1960.

Counting only men 18 and older, the 1964 figure averages out at 154 cigars per man, or about one every other day. Average consumption per cigar smoker would, of course, be higher. Women weren't counted on the assumption that few, if any, have switched to cigars.

However, total use by 1965 had dropped to 8.6 billion. (18)

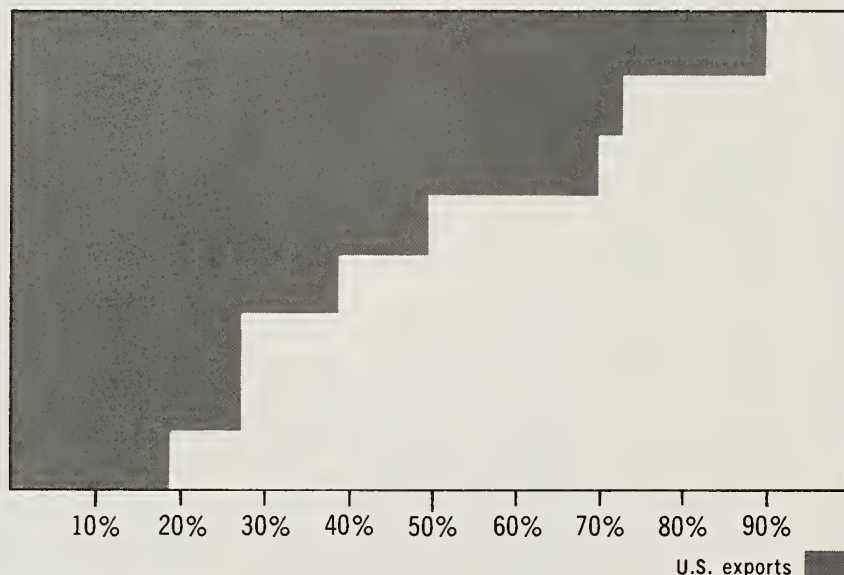


# AN EXPORT EPIC

A check of the world's freighters would reveal that nine out of every 10 bushels of soybeans moving in world trade originated in the United States. We also supply over 70 per cent of the world's exports of tallow, half the world's feed grain exports and almost 40 per cent of world wheat exports. The United States, despite its status as the leading industrial nation, is also the world's top agricultural exporter. During 1965 U.S. farmers produced over 20 per cent of the agricultural products moving in world trade. To carry these exports, an average of 14 cargo ships departed from U.S. ports every day during the year.

U.S. EXPORTS AS PER CENT OF WORLD TRADE IN 1964

Soybeans  
Tallow  
Lard  
Feed grains  
Wheat  
Cotton  
Tobacco  
Rice



Though our farm commodities moved to over 150 countries around the world in fiscal 1964/65, roughly three-fifths were destined for only 10 countries. Japan was our No. 1 cash buyer; India our biggest recipient of farm products under government programs. Our chief market area was Europe, including the European Economic Community (which purchased \$1,371 million of our \$6,097 million export total in 1964/65), the European Free Trade Association (\$668 million), and the Soviet Bloc (\$101 million).

OUR TOP TEN MARKETS FOR FARM PRODUCTS IN 1964/65

Country	Value
	Million U.S. dollars
Japan	750.2
Canada	618.3
India	528.7
Netherlands	423.5
United Kingdom	417.2
West Germany	406.4
Italy	242.3
Pakistan	168.4
Belgium-Luxembourg	153.1
France	145.7
Others	2,243.2
<b>Total</b>	<b>6,097.0</b>



Our receipts from farm exports currently represent just about one-fourth of the value of total U.S. exports. And though nearly one-fourth of U.S. farm products move abroad under government programs, by far the largest proportion is commercial sales for dollars. In the past three years, our commercial sales alone have exceeded our total agricultural exports of a decade ago by more than \$1 billion. Also, since the United States sells far more farm products abroad than it buys, our farm exports play a big role in bettering our balance of payments position. In calendar 1965, our dollar earnings from farm exports netted us a surplus of nearly \$700 million over what we spent on farm imports.

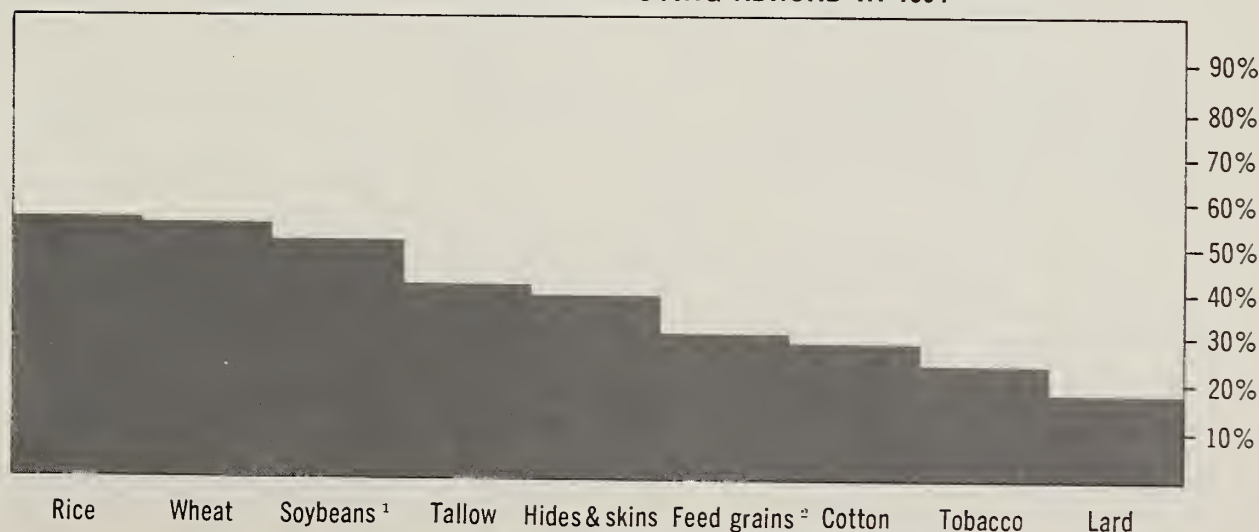
### AGRICULTURE'S SHARE OF TOTAL U.S. EXPORTS

AGRICULTURE'S SHARE OF TOTAL U.S. EXPORTS					
Year ended June 30—	Total exports	Nonagri- cultural exports	Agricultural exports		
			Total	Commercial sales <sup>1</sup>	Under govern- ment programs <sup>2</sup>
	Million U.S. dollars				
1953	15,126	12,307	2,819	2,369	450
1954	15,226	12,290	2,936	2,331	605
1955	14,927	11,783	3,144	2,278	866
1963	21,596	16,518	5,078	3,532	1,546
1964	24,674	18,606	6,068	4,482	1,586
1965	26,298	20,202	6,097	4,427	1,670

<sup>1</sup> Includes in addition to unassisted transactions, shipments of some commodities with government support in the form of (1) short-term credits, (2) sales of government-owned commodities at less than domestic prices and (3) export payments in cash or kind. <sup>2</sup> Sales for foreign currency, barter and donation.

Exports in most recent years have been the equivalent of one-sixth of the total income of U.S. farmers. In 1964/65, the output of one out of every four acres harvested in the U.S. moved abroad. The export market accounted for over half of our output of wheat, milled rice, dry edible peas and soybeans; over 40 per cent of the nonfat dry milk, tallow and hops; almost one-third of the dried prunes and cottonseed and about one-fourth of the cotton, tobacco, raisins, grain sorghums and flaxseed. (20)

### PER CENT OF U.S. OUTPUT MOVING ABROAD IN 1964



<sup>1</sup> Includes the oil equivalent of beans for export. <sup>2</sup> Sales by U.S. farmers.

U.S. output



## Europe's Crop, Livestock Prospects Appear Favorable at 1966 Midpoint

Halfway through 1966 all indications are that this year will be a fairly good one for European farmers.

A grain harvest roughly equal to that in 1965 appears to be in prospect in Western Europe. Wheat output may be on the order of 10 per cent less than in 1965, primarily because of a smaller sown area. But this decrease likely will be offset by a much larger harvest of feed grains in 1966.

The Soviet Union's grain production is expected to be substantially larger than the poor harvest of 1965. A mild winter and good soil moisture conditions have resulted in an excellent stand of winter grains. Soil moisture in the New Lands (crucial for the spring wheat crop) is generally good, considerably better than in 1965.

Other crops appear to be developing favorably in both Western and Eastern Europe, though acreages of some crops are smaller

than in 1965.

Cotton output in the Soviet Union is likely to be somewhat smaller than in 1965. However, the decline could be significant if recent earthquakes and storms in Uzbekistan, the heart of the cotton growing area, caused major damage to the irrigation network or the crop.

The outlook for livestock production in Western and Eastern Europe is also fairly bright. Livestock numbers, with the exception of hogs, are generally larger than a year ago and prospects for the production of feed and forage in 1966 appear favorable.

The recent outbreak of foot and mouth disease in Europe has apparently been controlled without great damage to livestock or to the production of livestock products.

*This is the first of four articles on the 1966 midyear agricultural situation by region. The overall situation will be reviewed in January 1967 in the annual "World Agricultural Situation," followed later by detailed wrap-ups of the regional situations. (21)*

## Japan's Exports Rise Faster Than Those of Any Other Nation in 1965

Japan, the Land of the Rising Sun, also became the land with the fastest rising exports during 1965.

Japanese exports last year rose a whopping 27 per cent over 1964 to \$8.5 billion (including all expenses up through loading onto ships). This was the largest increase in exports for any of the industrial nations. Japan's imports, at \$8.2 billion (including cost, insurance and freight), were only about 3 per cent greater than in 1964.

Slightly over one-fourth of Japan's total imports, about \$2.4 billion, were from the United States. Of this, \$966 million were farm products, up from \$810 million in 1964. On a country basis, Japan has been our No. 1 market for farm products for the past five years.

Japan's major farm imports from the U.S. in 1965 were: feed grains (all types), valued at \$250 million; soybeans, \$179 million; and cotton, \$133 million. (22)

### Foreign Spotlight

**CUBA.** This year's sugar crop is expected to total less than 4.5 million metric tons, compared with 1965's crop of 6 million. Trade agreement commitments and domestic needs are just about equal to Cuba's 1966 sugar supply. However, if world prices improve, the USSR (with large sugar stocks) may release Cuba from much of its 1966 commitment so Cuba may earn more foreign exchange.

**INDIA.** Early this June the Indian rupee was devalued by 36 per cent as government officials endeavored to correct the country's severe balance of payments problem. The new exchange rate is 7.5 rupees to the U.S. dollar, compared with the former rate of 4.76 to the dollar.

So that devaluation will have the desired effect, import duties have been lowered on many inputs used by those industries which contribute

to exports or provide substitutes for imports. Hopefully, increased imports of raw materials and spare parts for these priority industries will bring production up to full capacity. This, in turn, will permit an increase in exports and the substitution of domestic products for imports—which are the major aims of the devaluation.

**NIGERIA.** An agreement to admit Nigeria as the first English-speaking associate member of the European Economic Community (EEC) has been successfully negotiated (though not ratified). The agreement will permit Nigeria free entry to the EEC market for all products except cocoa, palm oil, peanut oil and plywood (for which there are quota arrangements). In return, Nigeria will grant a 3 per cent tariff reduction on 26 products from the EEC. The EEC-Nigerian agreement is expected to have only a minimal effect on U.S. trade with Nigeria. (23)



This is ERS...

*This is the fourth in a series of articles on the seven divisions that make up the Economic Research Service. The series highlights the research studies and findings that help to answer the perennial ifs in American agriculture.*

## FOREIGN DEVELOPMENT AND TRADE

Standing in the south 40 in the midst of his ripening grain, the Kansas wheat farmer is a long way from Kobe, still farther from Madras.

Yet Japan is his top dollar market for wheat abroad. And India is the top recipient of wheat under our foreign aid programs.

Today the two nations are studies in contrast. Japan has a vigorous expanding economy. India is struggling to feed a population over twice the size of ours in a land area only one-third as large as in our 50 states.

It wasn't always so. Japan was a major beneficiary of U.S. aid for more than a decade after World War II. And our aid paid off in a rejuvenated Japanese economy that could buy U.S. goods for dollars.

But is Japan an isolated case? What about India? What about the 100 or more other countries still getting U.S. food aid? What's the prospect of their becoming cash markets for our farm goods? Once U.S. aid has helped them produce more of their own food will they buy less from us? Or once they earn enough foreign exchange to buy food abroad, will they buy from somebody else?

These questions have caused concern in Congress, among farm groups and in the export trade. And for good reason. Today the export market takes a sixth of all we grow, \$6 billion worth or more. With world population and income growing, this market should get bigger. But will it?

A logical way to answer such questions is to find out what na-

tions actually *do* earn, produce, import and export as they move up the economic ladder.

Conducting the complex analysis was the task of ERS's Foreign Development and Trade Division (FDT).



INTERNATIONAL MONETARY RESEARCH

For 87 countries, developed and less developed, FDT economists first traced what had happened to income, total and per capita, in the 20-odd years between the start of World War II and the start of the 1960s.

For the same two periods for the same 87 countries they next analyzed changes in *total* imports and exports, that is, industrial and consumer goods, including farm products.

Finally, they compared the farm trade picture alone for 1959-61 with what it was prewar. This was done for 57 countries, all those where adequate figures were available.

Based on these past trends, Division economists were now able to project what's likely to happen to our exports in the years ahead. And results show that the very nations we are aiding today are apt to be cash customers in the future.

Looking first at the developed world—Europe, Canada and Japan among others—the analysis showed that developed countries will buy from us more industrial and other nonfood consumer goods than food. Imports of food go up only 7 per cent with every 10 per cent increase in per capita income; industrial and other imports jump 11 per cent. But the less developed world—much of Latin America, Africa and Asia—will import more food. While total imports should jump 11 per cent for every 10 per cent increase in personal income, farm imports bought from the United States *for cash* could increase as much as 21 per cent for every 10 per cent rise in personal income.

By 1980 our farm exports should run about \$9.3 billion a year, double the 1959-61 average. And \$8 billion of this will be dollar sales, not aid shipments.



This study is typical of the work of ERS's Foreign Development and Trade Division. Still, it's only one project in one of the Division's four major areas of research:

*Effects of Foreign Economic Development on Agriculture.* Unlike our own industrial economy, the less developed nations rely on agriculture to support over two-thirds of the labor force and provide about half of the national income. This means that any marked improvement in people's income and living standards must be generated first by raising farm output, farm marketings and consequently farm income. Long-range, it means farm output per man has to be improved in order to free workers for jobs in industry.

FDT's role in this research area is to pinpoint the factors that help or hinder agricultural progress.

Is a country's traditional way of using its land and water resources the best way? Is an inequitable tax structure dampening the farmer's incentive to produce more? How can local beliefs and customs be used to introduce new farm technology? What improvements are needed in transportation, education and health as they pertain to farm people and farm output?

In short, what are the priorities that governments should give to these many pressing needs in setting up development programs?

The plight of the less developed nations is by no means hopeless. One recent FDT study showed that 12 countries as diverse as Taiwan and Brazil have upped farm production faster since 1948 than the United States itself did in any comparable period.

The study shows that where land is limited, more workers can be added for more intensive cultivation of what land there is.

Take Taiwan. The island's land suitable for agriculture is very restricted. So the develop-

ment program was designed to make each acre produce as much food as possible. This was done by stressing irrigation, use of chemical fertilizer and better seeds, coupled with improved ways of tilling the soil and by growing two or more crops a year. As a result, Taiwan has maintained a high rate of increase in farm output.

*Export Programs and Market Development.* Nearly half of all



EXPORT PROGRAMS RESEARCH

U.S. foreign aid is food aid. It is as diverse as shipments of dry milk to Pakistan, poultry to Iraq, even lentils to Guinea.

Whatever its form, food aid is a big program and its effectiveness is being constantly evaluated by the Division's international specialists. Their purpose is to give Congress and foreign aid officials an assessment of the program in various countries that will help them in deciding

whether to keep or change the present emphasis.

Examples are studies of the food aid programs in Spain, Turkey, Israel and Colombia. Thanks to our program, people in all four nations have received more and better foods at prices they can afford. Food aid sales have helped to finance industrial and farm improvement projects. And with their economies thus strengthened, these countries have been able to up commercial imports of food from the United States.

The Division's market development work deals with the everyday problems that most developing nations face in trying to get their imports and homegrown foods distributed to the people. Are storage, refrigeration, transportation and processing facilities adequate? One FDT study suggests the answer is *no* in most cases. As per capita income goes up, most developing countries, unless they plan ahead, won't have the marketing structure to supply the foods their citizens can afford to buy.

*International Monetary and Trade Research.* Like a bookkeeper entering debits against credits in a firm's accounts, FDT specialists in this research area keep a running tally of the financial position of 111 countries.

There are several reasons for this international bookkeeping. First, it gives foreign aid administrators guidelines for deciding how best to sell a less developed country the food aid it requests. (Aside from small donations and emergency feeding, food aid isn't a 'give-away' program.) Can Malawi afford long-term credit payable in dollars? Or should our food aid be sold for Malawi's own currency, part of which will be used for that nation's development program, part of which will go to defray U.S. embassy and other costs in the country?

To what extent do our agricultural exports lessen our balance



of payments problem? Our military and other commitments around the world drain our reserves. Dollars earned by farm exports help to replenish them. FDT monetary experts trace the intricate ebb and flow of foreign exchange to show that our balance of payments deficit would be several billion dollars larger than it is each year without the money earned by U.S. farm products abroad.

Trade research assesses regional and world problems that have a direct bearing on U.S. trade. For instance, FDT economists have shown that something needs to be done about the maze of conflicting subsidies, tariffs and overlapping restrictions that both grain importing and exporting countries use to protect their own farmers. The present situation, researchers show, threatens to disrupt the world grain market in the years ahead.

Other trade research investigates such problems as how the policies of the European Common Market are going to affect U.S. grain and meat sales to the six-member group; prospective trade relationships with the Central and Latin American Common Markets and other regional groups; and the present and proposed international agreements on sales of wheat, cotton and other commodities that might assist or retard U.S. sales in foreign markets.

*Trade Statistics and Analysis.* How much wheat, corn, soybeans, cotton, tobacco and other commodities is the United States selling to the United Kingdom this year? To Canada? To Costa Rica? To the entire world?

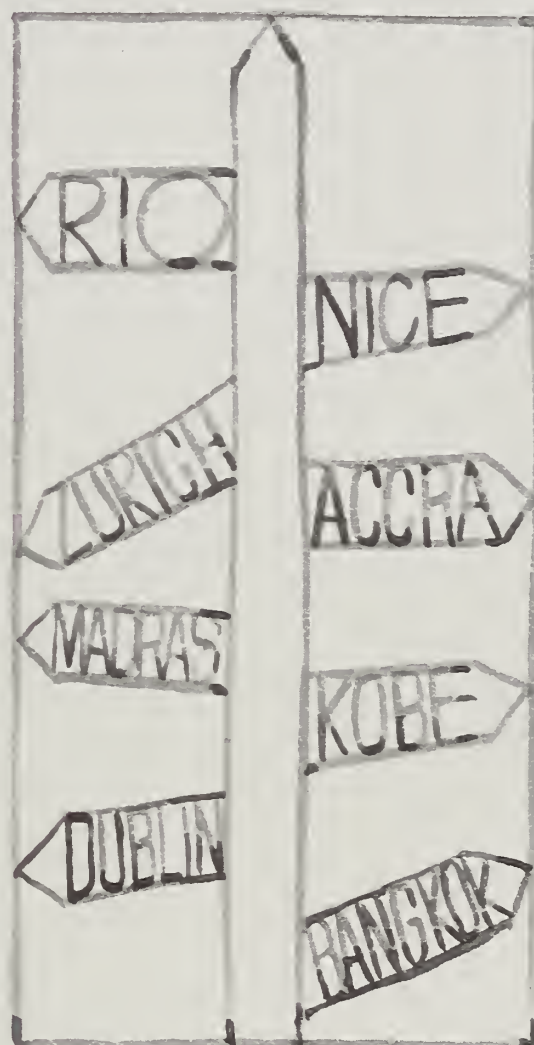
How much are these agricultural exports worth in dollars and cents? What is the outlook for these exports next year? The year after? What share of these exports represents sales from farms in Iowa, Texas, Georgia and the other 47 states?

What's the tonnage and dollar value of foods we import, such

commodities as sugar, coffee, cocoa and bananas?

Compiling the thousands of figures and analyzing the major factors and developments that affect our import-export position is another basic responsibility of the Foreign Development and Trade Division.

Data compiled by the Division show that our farm exports in the last few years have set a new record almost annually. And sales



TRADE STATISTICS & ANALYSIS

for dollars, in contrast to aid shipments, have gradually made up a larger part of these total shipments every year.

However, U.S. trade statistics tell only part of the story. What other countries are buying and selling among themselves can cause shifts in U.S. markets abroad. Are Mexico's cotton sales to Japan hurting our trade? Has the Netherlands, benefitting from its membership in the European

Common Market, taken much of our poultry business in West Germany, also a member?

To get such answers FDT has recently started to analyze figures on 150 commodities traded among 70 countries, which together account for 90 per cent of world trade in farm products.

These trade trends in turn help to formulate the U.S. position on international issues.

The Division also does special studies on the impact that customs unions and other trade bloc arrangements have on world farm trade. For instance, the European Common Market has a farm policy that sets up variable levies on many commodities. What impact will this policy have on future U.S. exports?

The Division issues its trade analysis findings in a monthly publication, *Foreign Agricultural Trade of the United States*.

In summary, much of the work of the Foreign Development and Trade Division is devoted to the principle that Americans can help other nations help themselves. The Division provides much of the research that assists our policymakers and those of other nations in doing a better job for this humanitarian purpose.

But another basic concern of government is to help American farmers sell more of their products in foreign markets. To this end it is the Division's job to keep a thumb on the pulse of world trade, to spot changing patterns and to see emerging market opportunities for American agriculture.

This kind of economic intelligence spans the miles between Kansas and Kobe. In a sense it brings the American farmer face to face with his customers in Japan and scores of other countries. It enables him to look ahead and plan ahead, to grow the foods that will sell in overseas markets and in the end to strengthen his own financial position and that of the American economy. (24)



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### Centennial for Statistics

It's been a hundred years since the U.S. Department of Agriculture began keeping a continuous monthly series of agricultural statistics.

Actually, groundwork for this service was begun four years earlier in 1862, when the Department of Agriculture was formed and a commissioner appointed to "... acquire and preserve all information concerning agriculture ... by the collection of statistics, and by any other appropriate means within his power."

Commissioner Isaac Newton wasted little time in gathering these statistics. The Division of Statistics was formed in 1863. It used information submitted by voluntary reporters and began issuing crop condition reports. The continuous series began in 1866.

However, estimating agricultural production in this country has a heritage that predates the Department of Agriculture by nearly a quarter century. In 1839 Congress allocated \$1,000 to the Patent Office to collect agricultural statistics and distribute seeds. This service lasted three years. Then—from 1841 to 1845—annual estimates of about a dozen crops were made.

Development of the statistical reporting service began gradually. The Crop Reporting Board was organized in 1905. In 1912 it began to forecast production of important crops prior to harvest. Full-time state agricultural statisticians were appointed in 1914; the pig survey through rural mail carriers was made for the first time in 1922 and livestock reporting was organized in 1923. (25)

# THE FARM INDEX

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